

BUFFER OVERFLOW DETECTION

Abstract

A system includes a memory, a plurality of pages held in the memory, an instruction translation look aside buffer (ITLB), a first data translation look aside buffer (DTLB), and a translation look aside (TLB) miss handler. The system also includes an executable/non-executable (x) indicator associated with each page in memory. The TLB miss handler sets the x-indicator for a particular page to indicate “non-executable” when that page is accessed in a mode that allows writing to that page. The ITLB or the ITLB miss handler refuses to allow instructions from a page with an associated x-indicator of “non-executable” to be loaded into the instruction buffer.